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24. MIMICRY OF A CROW CHICK BY AN ASIAN KOEL *EUDYNAMYS SCOLOPACEA* AS A DEFENCE AGAINST ATTACK BY HOUSE CROWS *CORVUS SPLENDENS*

The Asian koel *Eudynamys scolopacea* is a common brood parasite of corvids, mynas and other species throughout India and much of southeast Asia. In India, this cuckoo's predominant host is the house crow *Corvus splendens* and to a lesser extent the jungle crow *C. macrorhynchos* (Lamba 1976). This author has observed that the high populations of house crows in towns and villages accounts for the large concentrations of Asian koels that may sometimes occur there. Despite the commonness of this brood parasitic relationship, the exact way in which Asian koel gains access to the hosts' nest for egg laying remains a point of controversy.

An interaction observed between an Asian koel and a group of house crows in the village of Anjuna, Goa on December 17, 1999, at a time when house crows were breeding in the area, may throw light on this question.

OBSERVATION

At dusk, about 1800 hrs, a group of five house crows were seen noisily chasing a female, or perhaps a juvenile, Asian koel. The latter alighted in the top of a coconut palm and was immediately surrounded by the house crows that were cawing loudly and aggressively. One crow moved within *c.* 30 cm of the Asian koel, and

seemed about to launch a pecking attack. At that moment, the Asian koel responded to this threat by opening its mouth wide to reveal the bright red gape, which was held upwards, and emitting a call closely resembling that of a begging house crow chick.

This display by the Asian koel resulted in an instantaneous halt to the attack by the approaching crow, while the other four crows also became silent and passive. After about two minutes, during which time no further aggressive behaviour was displayed by the crows, the Asian koel slipped away into the semi-darkness of the coconut grove. The light was now failing rapidly and after a few minutes more of perching around abstractedly, the crows also flew off singly.

DISCUSSION

House crows are well known to behave aggressively towards both sexes of the dimorphic Asian koel, particularly during the breeding season, chasing them on sight even far from nest, sometimes physically attacking them (Hume 1889; Lamba 1963) and even in rare cases killing them (Lamba 1976). The peak breeding season for house crows in southern India is April to May but some breeding, as in the present case, takes place in November and December (Lamba 1963).

Given this aggressive behaviour on the part

of the hosts, there has been discussion and speculation over the years as to how the female Asian koel finds the opportunity to deposit her eggs in the vigilant house crow's nest. Dewar (1907) and Dharmakumarsinhji (1954) described several instances in which Asian koels appeared to take advantage of this aggressive response to facilitate access to the house crow's nest for the egg loaded female Asian koel. Dewar proposed a scenario in which the black male Asian koel lures the sitting house crow away from the nest, so that the cryptically marked brown-barred female Asian koel can slip in to deposit its egg. Although Lamba (1963) at one time accepted this hypothesis, by 1976, his own extensive studies had led him to believe that such observations were coincidental rather than a well-orchestrated strategy and that, in fact, it was simply a case of the female Asian koel taking any opportunity to get to the unoccupied nest. Furthermore, Eates (undated) described three instances where female Asian koels were seen in nests alongside incubating house crows, flapping and jockeying for position, and that calls resembling those of young house crows were heard. In each case, the Asian koel laid an egg and was not attacked by the resident crow. This suggests that the female Asian koel produced a call like a young house crow to appease the rightful occupant of the nest.

The instance described here, not only involved mimicry of a crow chick, but also of the chick's gape and begging behaviour. The Asian koel had a bright red gape, resembling that of a house crow chick. Goodwin (1986) also described the inside of the house crow chick's mouth as fleshy red and Lamba (1976) as blood red. Interpretation of the observation described

here depends on whether the Asian koel in question was an adult or a juvenile. Stuart Butchart (pers. comm.) pointed out that fledgling Asian koels have a bright red gape, but that this probably becomes duller in adults, as is the case with other cuckoos. As no gape flange was visible, the bird would not have been a recent fledgling. However, older fledglings do indeed resemble females. If the Asian koel were a juvenile, it may have provoked a mixed response from the crows: mobbing whilst in flight, followed by tolerance once begging was initiated.

In any case, it seems likely from the various published descriptions mentioned above, that female Asian koels retain this fledgling-like behaviour and may resort to mimicry of house crow chicks to avoid physical attack when they have been cornered and are unable to escape. In the case of Eates' observations, perhaps the female koels were in the process of egg laying in an unoccupied nest when the house crow returned and, through mimicking a chick, the Asian koel was able to finish depositing an egg and depart without attack. The key to understanding this interaction is whether the gape colour of the adult female Asian koel is able to elicit the appropriate parental response in house crows. Clearly, such an ability would have enormous survival value, not only for the individual Asian koel, but also for the species as a whole.

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25. BUFFY FISH-OWL (*KETUPA KETUPU*) IN SUNDARBANS, BANGLADESH

(With one plate)

Three species of fish-owl are known from the Indian subcontinent: the brown fish-owl (*Ketupa zeylonensis*), the tawny fish-owl (*Ketupa flavipes*) and the buffy fish-owl (*Ketupa ketupu*). The last sightings of the buffy fish-owl from Assam were recorded by Stevens (1915) and Baker (1927). Stevens writes "Common in the forest streams which emerge into the Dibru" and mentions localities "Rungagora, 1902" and "Dejoo, North Lakhimpur, 1911". Baker says "I found it not very rare in the hills of South Assam and Coltart obtained one specimen in Dibrugarh". Further, "Coltart and I obtained eggs in the Khasia Hills and North Cachar".

The buffy fish-owl, also called the Malay fish-owl, is common in southeast Asia. According to Koenig *et al.* (1999) and del Hoyo *et al.* (1999), its present range of distribution covers Myanmar, Thailand, Vietnam, the Malaysian Peninsula and Indonesia (including Sumatra, Java, Borneo).

Fish-owls are not rare in the Sundarbans, and the huge mangrove forest in the lower delta of the Ganga, but are usually hard to identify when only seen in flight in poor light conditions. Some more recently published bird lists (Khan 1986; Hussain and Acharya 1994) mention brown fish-owl and tawny fish-owl, or only brown fish-owl, to occurring here.

It was only in November 2000, that we were able to photograph fish-owls in the southeastern Sundarbans of Bangladesh (Kotka Sanctuary – Plate 1) in early mornings and late afternoons. Analysing the photographs of three different individuals, all of them could be identified as buffy fish-owls.

- Main characteristics of the buffy fish-owl:
- at 38-48 cm it is smaller than the brown fish-owl (56 cm) and tawny fish-owl (58-61 cm);
 - lacking fine horizontal cross-barrings on underparts (typical for the brown fish-owl);
 - colour above rich brown (against rich orange-rufous to tawny of the tawny fish-owl, and duller brown of the brown fish-owl);
 - bare tarsi (against partly feathered tarsi of the tawny fish-owl);
 - relatively short tail with few whitish bands (against longer, more narrowly barred tail of the tawny fish-owl);
 - wings more broadly and buffish-white barred (against less broad orange-buff barrings of the tawny fish-owl).

This is, as far as known, the first record of the buffy fish-owl from Sundarbans and a re-discovery of the species in the Indian subcontinent (last record by Baker) after almost 80 years! It is perhaps not impossible that the buffy fish-owl was overlooked or mistaken for a tawny fish-owl, as Ali and Ripley (1969) along with their PICTORIAL GUIDE (1983), widely used in the past decades for identification of owls on the Indian subcontinent, does not mention the species. We became aware of the buffy fish-owl when consulting Grimmett *et al.* (1998).

The fauna of Sundarbans has, besides the buffy fish-owl, several other affinities with the Malaysian Region. Paynter (1970) mentioned laced woodpecker, blue-winged pitta, mangrove whistler and orange-bellied flowerpecker in this context (specimens collected in 1958 in the Sundarbans of Bangladesh). Other species from